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Nature Notes

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YOSEMITE NATURE NOTES

VOLUME XXXVI - NUMBER 10

OCTOBER 1957

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Sentinel Rock and Merced River in autumn.

—Anderson



Improved mountain roads are now at hand.

—Anders

Yosemite Nature Notes

THE MONTHLY PUBLICATION OF

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THE YOSEMITE NATURAL HISTORY ASSOCIATION, INC.

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VOL. XXXVI

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NO. 10

SOME ASPECTS OF MISSION 66

Part II

By Roland Steinmetz, Ranger-Naturalist

Last month there were described some problems pertaining to areas administered by the National Park Service, with emphasis placed on the specific problems needing solution in Yosemite. Let us look now to the future and to the program under MISSION 66 which will enable the answers to the questions to become realities.

Improvement of Visitors Use Facilities

New Operating Base. Near El Portal, on land outside the Park already used for some park operations, will be developed an operating base of such magnitude and capabilities that many of the present space-consuming operating facilities in the Valley can and will be removed and located there. Contemplated for removal to the new base are the obsolete incinerator, the dump near Camp 11, warehouses, bulk storage, repair shops, certain employee housing, and related supporting facilities of the National Park Service and Yosemite concessioners. Only minimum operating facilities will remain. Such a move will free more of the precious and scarce Valley



Rundown privies are being replaced.

—McIntyre

floor for visitor use and enjoyment.

Campgrounds. The number of campsites outside the valley will be tripled from the present 800 to 2500, thus making the number of out-of-valley sites about equal to the number within Yosemite Valley. All of the present peripheral campgrounds, except Glacier Point, will be enlarged.



The new Yosemite Lodge was completed in 1956.

New grounds are scheduled for Crane Flat. An increased number of day-use picnic areas are planned on a parkwide basis.

Concessioner Accommodations. The number of overnight accommodations provided by the concessioner in the Valley will remain substantially at 4500. Existing sub-standard cabins, both wood and canvas will be replaced with low cost multiple room units. Good progress along these lines has already been made—evidence the recent completion of the Yosemite Park and Curry Company's Yosemite Lodge, and Cedar Cottage, at a cost of over one million dollars.

White Wolf Lodge near the Tioga Road will be enlarged to accommodate 200 visitors compared to 20 at present. An additional High Sierra Camp is slated for Little Yosemite. Concessioner-operated trailer courts

are scheduled to be developed at several points, including Wawona.

Additional meal service for summer peak loads will be provided for in the construction of a new restaurant and delicatessen by Degnar Donohoe, Inc., scheduled for 1958. The new Merchandise Center of the Yosemite Park and Curry Co. will



The White Wolf water line is being replaced
—Anderson

include a grill. Construction work has begun on the latter at a location in Yosemite Village southeast of the post office. When these new facilities are finished in Yosemite Village, the Old Village will be razed and the land restored to its original condition.

Interpretive Services. The present museum will be enlarged and improved. In the summer of 1957 the Happy Isles Nature Center was opened in the building which formerly housed the state fish hatchery at Happy Isles. Many favorable comments have been received on the simple and effective approach used there to interpret Yosemite. The Wawona Pioneer Village, to be constructed with the recently-repaired covered bridge as a nucleus, will be a second major visitor interpretive center. Here early California, with

its historically rich background, will be the main theme.

Improvement of Park Roads and Trails

The key to successful development and use of many of the aforementioned visitor use facilities lies in improved transportation through betterment of Park roads and trails.

The Tioga Road. By 1961 the primitive 21 mile section of the presently narrow, winding, and steep Tioga Road will be replaced by a modern, shorter route.

Heavy equipment is now at work. Portions of the old road will be preserved to enable visitors to get off of the "beaten path" and to provide access to several camp grounds.

The Big Oak Flat. The seven mile section of this historic road between Crane Flat and Carl Inn will be

The old Hodgdon cabin at Aspen Valley will become part of the Wawona Pioneer Village.

—Anderson





The new Tioga Road is under construction and should be completed by 1961.

—Anders

replaced by a modern road to connect with State Route 120. Again, the old road will be retained to allow access to the Tuolumne Grove of Giant Sequoias.

The All Year Highway. Improvement will be made on the portion between El Portal and Yosemite Valley.

Other roads. To relieve congestion and erosion, a bypass road is planned around the periphery of the Mariposa Grove of Giant Sequoias. Main circulation routes in Yosemite Valley will be improved to handle the increased needs and safety of visitor touring.

State improvement of Highway 120, both at the east and west park entrances, is expected. It is reasonable to believe that when this has been done, private investors will be encouraged to develop overnight and eating accommodations nearby, thus relieving the strain on in-park facilities.

Trails. A number of new trails will be constructed to round out the circulatory system. Some trails now hazardous and poorly maintained will be improved. The long-needed horse trail to Vernal Fall will be constructed.

Private Lands

The acquisition of privately-owned lands within the park will be accelerated through increased availability of funds. Condemnation proceedings will be entered into only as a last resort in cases where lands stand in the way of park development.

Increased Protection

A moderate increase in staff personnel in all areas of park function is provided for. Both permanent and seasonal staffs will be expanded.

In addition to the protection that the Sequoia groves will receive from road re-routing, it is expected that visitors in the future will walk on established trails or perhaps elevated walkways in the groves, rather than at will. A study of ways of re-

storing the badly eroded soil in the vicinity of the trees is in process.

Summary

The problems facing all areas administered by the National Park Service and Yosemite in particular are numerous. Often victims of their own beauty, increased population and travel trends have emphasized the inadequacy of present staff and physical facilities to cope with the problems of today and the future.

Far-sighted planners have given the National Parks an encompassing program coupled with the necessary financial means with which to bring up to rightful standards the service, protection, and enjoyment which the American people have a right to expect from their National Park Service.

Many miles of trails will be rebuilt.

—Anderson



MICE IN OUR MEADOWS

By William Dunmire, Park Naturalist Trainee



Meadow mice took over the Valley this year.

—Anderson

If park visitors were asked to name the most abundant mammal found in Yosemite Valley, their answer, based on numbers of individuals they had actually seen, would probably be either one of the species of squirrels or the deer. However, for every deer here in the valley there are undoubtedly thousands of smaller mammals. One of these unnoticed residents, the Yosemite meadow mouse (*Microtus montanus yosemitae*) dwells exclusively in our open grassy meadows. Since these mice are mostly nocturnal, they are rarely observed by the visitors, yet evidence

of their numbers from runways and burrows may be found in any of the valley grasslands.

These mice, living mainly on fresh grass shoots, dig small shallow burrows under the sod where they raise their young and spend most of the daylight hours. When they come up to forage in the early evening and through the night, they follow tiny paths or runways which they have cut through the vegetation. In some years these runways are found only in the most favorable locations in the meadows, while in other years every possible grassy site is covered



The meadow mice run-ways made a patch work pattern in the meadows.

—Anderson

with a dense network of the tunnels. Apparently, then, there are great fluctuations in numbers of these mice from year to year.

During the summer of 1957 meadow mice were obviously at a "population high" in Yosemite Valley. On nature walks leading out across Sentinel Meadow we noticed the great abundance of runways and were even able to see these mice scurrying about in full daylight on most of our walks. Several park rangers living in the residential areas reported seeing meadow mice on their lawns and gardens, sites normally unused by these rodents.

In northern climates throughout the world investigators have found that *Microtus* and other related forms are prone to spectacular fluctuations in population number. Probably the most violent of these population changes occurs among the lemmings of the far north, close relatives of our meadow mice, which in some years

build up their numbers to such an extent that millions of them may be drowned in the sea in their search for unoccupied homesites. Studies of fluctuations in various rodent populations have shown that a high is reached at regular intervals, usually every four years for meadow mice, and, therefore, the fluctuations may be properly termed "cycles".

The cause of these cycles has long baffled zoologists, and many theories have been offered to explain the phenomenon. A characteristic of most cycle species is that they are highly prolific. Meadow mice, for example, may start breeding when less than forty days old, and with an average litter size of about six young, and the possibility of several consecutive litters, the reproductive potential of a single female during the breeding season is enormous. Indeed, factors that effect breeding success are likely causes of the cycles. Annual changes in



The ordinarily nocturnal meadow mouse could be found in the daytime in open meadows.

—Anderson

food supply and quality, as effected through differences in rainfall and sunlight, have been suggested as having possible correlation with the cycles. The mouse cycles have even been attributed to such seemingly unrelated phenomena as sun spots and atmospheric radiation, but no really satisfactory explanation has yet been offered.

Rodent cycles are characterized by sharp dieoffs following the period of extreme abundance. Both predators and internal parasites have been suggested as direct causes of the sudden reductions in numbers. It is certainly true that species such as our meadow mice are faced with many enemies including most snakes, hawks, owls, and nearly all predatory mammals within their range. It is probably a rare mouse that lives to celebrate his own birthday. However, the predators never seem to be abundant enough to cause the typical sudden dieoffs. More recently it has been shown that animals living in extremely dense populations are subject to in-

ternal stresses brought on by the strife of crowded conditions. These stresses may cause an imbalance of body hormones resulting in a lowered resistance to disease and general poor health. In fact, this summer it was found that captured meadow mice placed in cages for study would die within a few days although natural food and water were available. One seemingly healthy fat mouse died in less than twenty-four hours after being caged with two other mice, yet an autopsy following his death showed he had a full stomach and no apparent parasites or injuries. Possibly stress may have played a part in killing our captured mice.

Next summer it will be interesting to examine Yosemite's meadows to determine if a dieoff has taken place among the *Microtus*. A brief check of Sentinel Meadow for the abundance of mouse runways will easily reveal the status of these variable populations. Here our Yosemite meadow mice provide a wonderful opportunity for studying a problem that remains a mystery to science.

A NATURE WALK AROUND MIRROR LAKE

By Dave Essel, Ranger Naturalist

It did indeed seem like wilderness as we began our nature walk with the ranger naturalist along the path to the left of Mirror Lake. The scent of pine, the quietness of the lake, the sound of voices quickly dissipated by the many white fir seedlings — this was good. The hoof prints of many horses, tennis shoes, even coyote and a barefoot child made fascinating patterns in the thick red brown dust of the path.

What matter that others had passed this way — it was morning and the whole earth cried out with freshness and the everchanging moods of life. For this moment we were the first to see this spectacle, we stood alone with *this*.

Melodiously through the air the

notes of the male black-headed grosbeak trilled from his nest perched in the large black oak near the shore, happy in keeping his mate's eggs warm. Out on the lake a swallow sailed and skimmed after insects. The early morning sun glinted across the still lake lighting low willows, striking in emblazoned splendor the rich red bark of the incense-cedar, tracing delicate shadows through the lacelike foliage. Though this tree did not have the broad fluted base of the Sequoia, giant of the forest, it had much of its serene dignity.

As we walked along the path, questions arose — how old is that ponderosa pine? What is the difference between the red and white fir? What flower is, this? You mean there

The trail skirts Mirror Lake.

—Anderson





We had a look at the glacier polish.

—*Anderson*

are actually two plants living together to form a lichen? . . . and that's what makes those black streaks on Half Dome? Gee — !! Then staghorn lichen on that ponderosa pine must be two plants too?!

Breaking off the main trail up to our left we climbed to where we could see the glacial polish visible from the Valley floor. There we mused on the tremendous age of these rocks and the cataclysmic changes associated with the Valley. Here in this small vista before us we envisioned the panorama of nature's changefulness. Here the vastness of time telescoped the present into infinity of ages and epochs.

As we proceeded we skirted damp ground bordering the lake. Here in

the shadowy sunlight grew dogwood and thimbleberry, and the miner's friend, scouring-rush. Primitive plant, with mere fringes which a botanist excuses for leaves. You recall those turbulent lusty days of the gold — the ending of the happy day of the Ahwahneechee — dwellers of the deep grassy place which we call Yosemite. How often had your brood witnessed the ice age to be driven from their damp nursery, as it freezes, finally to thaw more. The, climate slowly changing to creep inevitably back, windborne to this, your home? Three times the geologists tell us the glaciers built up, flowed and receded. "Our glaciers are continuing to melt back each year" the naturalist was say-



The many birds interested us.

—Anderson

ing. "Mirror Lake will eventually silt in, be a broad meadow and then finally a pine forest." This is the way with many Sierran lakes. So you, too are mortal, quiet waters, called Ahwiyah by those people who knew well how to watch beauty with beautiful language.

Massive rocks, covered with gray and black lichen and with clinging moss came into view and as we paused the tale was told of how these first plants began the making of soil. How, as they carried on their body processes a gas, carbon dioxide, was released which formed a weak acid with the dew to gradually eat away at the binding matrix of the granite. Little by little, year after year this occurred until finally a seed, sprouting, found sufficient dust and dirt in a crack in the rock to

survive. We found many rocks with thin layers of moss and soil on them, profuse with miner's lettuce.

Crossing turbulent Tenaya Creek we noted the scar marks on the white fir below the bridge, where stream-tossed boulders smote it during the 1955 flood. A flood washing many bridges away, giving rise to comment "our main job seems to be building bridges." True, even metaphorically, young man. For the bridges you build — not just those wooden ones — but those of the mind, bridging man and nature, helping him to lift his eyes from his dusty feet in front of him to the grandeur of Half Dome. This you do on these nature walks, and unknown to you we return to track our children, a little surer of those things which are important.

Turning towards the west and down the south side of the Tenaya Canyon we passed along meadows filled with cowparsnips and woolymint. An incense-cedar topped with "witches broom," a cancerous growth, was pointed out. "Not much is known of why it happens, but apparently the plant hormones are stimulated, causing a multiplication of cells in this area, producing this strange effect. So, too, the burls of the redwood and numerous plant galls."

Climbing slightly on the bare granitic soil the naturalist pointed out pussypaws, a tiny low flower with clusters of wooly blossoms. Nearby grew mousetails. "You would expect to find the pussypaws growing

around these plants," he joked. Looking to our left we paused to watch a water ouzel dive and cavor in the water of the lake, spreading ripples, then flying off. Strange water-loving, brown bird, you weren't equipped with webbed feet to swim in water — why do you so love to build your nest near swift running streams, to dart therein after food for your young?

Descending narrow, steep steps we crossed a wooden foot bridge leading to the road. It was midday — the naturalist bade us a kindly adieu and we thanked him for his having given us his time. Many years from now I still shall know these scenes — the warm sunlight, the cool shadows, and my heart shall again know their goodness.

From meadow to forest we were drawn.

—N.P.



OUT OF YOSEMITE'S PAST

A One Picture Story



Mr. Jack Reischel, demonstrator for the White Auto Co. drove the first auto stage into the Valley. The trip was made on November 16, 1913 and took almost three hours from El Portal. The trip was a success and the stage operation was motorized shortly thereafter. We would like to get one of these old stages for the Wawona Pioneer Village. Does anyone know where they went?



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The Wawona covered bridge in 1926.

—Anderson

